

211 CMR 132.00: ACTUARIAL OPINION AND MEMORANDUM REGULATION

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132.01: Purpose

The purpose of 211 CMR 132.00 is to prescribe:

- (1) Guidelines and standards for statements of actuarial opinion which are to be submitted in accordance with M.G.L. c. 175, § 9B, and for memoranda in support thereof;
- (2) Guidelines and standards for statements of actuarial opinion which are to be submitted when a company is exempt from M.G.L. c. 175, § 9B; and
- (3) Rules applicable to the appointment of an appointed actuary.

132.02: Authority

211 CMR 132.00 is issued pursuant to the authority vested in the Commissioner of Insurance pursuant to M.G.L. c. 175, § 9 and c. 176, § 41. 211 CMR 132.00 will take effect for annual statements for the year 1997.

132.03: Scope

211 CMR 132.00 shall apply to all life insurance companies and fraternal benefit societies doing business in this State and to all life insurance companies and fraternal benefit societies which are authorized to reinsure life insurance, annuities or accident and health insurance business in this State.

211 CMR 132.00 shall be applicable to all annual statements filed with the office of the Commissioner after the effective date of 211 CMR 132.00. Except with respect to companies which are exempted pursuant to 211 CMR 132.06, a statement of opinion on the adequacy of the reserves and related actuarial items based on an asset adequacy analysis in accordance with 211 CMR 132.08, and a memorandum in support thereof in accordance with 211 CMR 132.09, shall be required each year. Any company so exempted must file a statement of actuarial opinion pursuant to 211 CMR 132.07.

Notwithstanding the foregoing, the Commissioner may require any company otherwise exempt pursuant to 211 CMR 132.00 to submit a statement of actuarial opinion and to prepare a memorandum in support thereof in accordance with 211 CMR 132.08 and 132.09 if, in the opinion of the Commissioner, an asset adequacy analysis is necessary with respect to the company.

132.04: Definitions

Actuarial Opinion means:

- (a) With respect to 211 CMR 132.08 through 132.10, the opinion of an Appointed Actuary regarding the adequacy of the reserves and related actuarial items based on an asset adequacy test in accordance with 211 CMR 132.08 and with presently accepted Actuarial Standards;

132.04: continued

(b) With respect to 211 CMR 132.07, the opinion of an Appointed Actuary regarding the calculation of reserves and related items, in accordance with 211 CMR 132.07 and with those presently accepted Actuarial Standards which specifically relate to this opinion.

Actuarial Standards Board is the board established by the American Academy of Actuaries to develop and promulgate standards of actuarial practice.

Annual Statement means that statement required by M.G.L. c. 175, § 25 to be filed by the company with the office of the Commissioner annually.

Appointed Actuary means any individual who is appointed or retained in accordance with the requirements set forth in 211 CMR 132.05(3), to provide the actuarial opinion and supporting memorandum as required by M.G.L. c. 175, § 9B.

Asset Adequacy Analysis means an analysis that meets the standards and other requirements referred to in 211 CMR 132.05(4). It may take many forms, including, but not limited to, cash flow testing, sensitivity testing or applications of risk theory.

Commissioner means the Insurance Commissioner of this State.

Company means a life insurance company, fraternal benefit society or reinsurer subject to the provisions of 211 CMR 132.00.

Non-Investment Grade Bonds are those designated as classes 3, 4, 5 or 6 by the NAIC Securities Valuation Office.

Qualified Actuary means any individual who meets the requirements set forth in 211 CMR 132.05(2).

#### 132.05: General Requirements

##### (1) Submission of Statement of Actuarial Opinion.

(a) There is to be included on or attached to Page 1 of the annual statement for each year beginning with the year in which this regulation becomes effective the statement of an appointed actuary, entitled "Statement of Actuarial Opinion," setting forth an opinion relating to reserves and related actuarial items held in support of policies and contracts, in accordance with 211 CMR 132.08; provided, however, that any company exempted pursuant to 211 CMR 132.06 from submitting a statement of actuarial opinion in accordance with 211 CMR 132.08 shall include on or attach to Page 1 of the annual statement a statement of actuarial opinion rendered by an appointed actuary in accordance with 211 CMR 132.07.

(b) If in the previous year a company provided a statement of actuarial opinion in accordance with 211 CMR 132.07, and in the current year fails the exemption criteria of 211 CMR 132.06(3)(a), (b) or (e) to again provide an actuarial opinion in accordance with 211 CMR 132.07, the statement of actuarial opinion in accordance with 211 CMR 132.08 shall not be required until August 1 following the date of the annual statement. In this instance, the company shall provide a statement of actuarial opinion in accordance with 211 CMR 132.07 with appropriate qualification noting the intent to subsequently provide a statement of actuarial opinion in accordance with 211 CMR 132.08.

(c) In the case of a statement of actuarial opinion required to be submitted by a foreign or alien company, the Commissioner may accept the statement of actuarial opinion filed by such company with the insurance supervisory regulator of another state if the Commissioner determines that the opinion reasonably meets the requirements applicable to a company domiciled in this State.

(d) Upon written request by the company, the commissioner may grant an extension of the date for submission of the statement of actuarial opinion.

132.05: continued

- (2) Qualified Actuary. A "qualified actuary" is an individual who:
- (a) Is a member in good standing of the American Academy of Actuaries; and
  - (b) Is qualified to sign statements of actuarial opinion for life and health insurance company annual statements in accordance with the American Academy of Actuaries qualification standards for actuaries signing such statements; and
  - (c) Is familiar with the valuation requirements applicable to life and health insurance companies; and
  - (d) Has not been found by the Commissioner (or if so found has subsequently been reinstated as a qualified actuary), following appropriate notice and hearing to have:
    - 1. Violated any provision of, or any obligation imposed by, the Insurance Law or other law in the course of his or her dealings as a qualified actuary; or
    - 2. Been found guilty of fraudulent or dishonest practices; or
    - 3. Demonstrated his or her incompetency, lack of cooperation, or untrustworthiness to act as a qualified actuary; or
    - 4. Submitted to the Commissioner during the past five years, pursuant to 211 CMR 132.00, an actuarial opinion or memorandum that the Commissioner rejected because it did not meet the provisions of this regulation including standards set by the Actuarial Standards Board; or
    - 5. Resigned or been removed as an actuary within the past five years as a result of acts or omissions indicated in any adverse report on examination or as a result of failure to adhere to generally acceptable actuarial standards; and
  - (e) Has not failed to notify the Commissioner of any action taken by any Commissioner of any other state similar to that under 211 CMR 132.05(2)(d).
- (3) Appointed Actuary. An "appointed actuary" is a qualified actuary who is appointed or retained to prepare the Statement of Actuarial Opinion required by 211 CMR 132.00; either directly by or by the authority of the board of directors through an executive officer of the company. The company shall give the Commissioner timely written notice of the name, title (and, in the case of a consulting actuary, the name of the firm) and manner of appointment or retention of each person appointed or retained by the company as an appointed actuary and shall state in such notice that the person meets the requirements set forth in 211 CMR 132.05(2). Once notice is furnished, no further notice is required with respect to this person, provided that the company shall give the Commissioner timely written notice in the event the actuary ceases to be appointed or retained as an appointed actuary or to meet the requirements set forth in 211 CMR 132.05(2). If any person appointed or retained as an appointed actuary replaces a previously appointed actuary, the notice shall so state and give the reasons for replacement.
- (4) Standards for Asset Adequacy Analysis. The asset adequacy analysis required by 211 CMR 132.00:
- (a) Shall conform to the Standards of Practice as promulgated from time to time by the Actuarial Standards Board and on any additional standards under 211 CMR 132.00, which standards are to form the basis of the statement of actuarial opinion in accordance with 211 CMR 132.08; and
  - (b) Shall be based on methods of analysis as are deemed appropriate for such purposes by the Actuarial Standards Board.
- (5) Liabilities to be Covered.
- (a) Under authority M.G.L. c. 175, § 9B, the statement of actuarial opinion shall apply to all in force business on the statement date regardless of when or where issued, *e.g.*, reserves of Exhibits 8, 9 and 10, and claim liabilities in Exhibit 11, Part I and equivalent items in the separate account statement or statements.
  - (b) If the appointed actuary determines as the result of asset adequacy analysis that a reserve should be held in addition to the aggregate reserve held by the company and calculated in accordance with methods set forth in M.G.L. c. 175, § 9B, the company shall establish such additional reserve.
  - (c) Additional reserves established under 211 CMR 132.05(5)(b) and deemed not necessary in subsequent years may be released. Any amounts released must be disclosed in the actuarial opinion for the applicable year. The release of such reserves would not be deemed an adoption of a lower standard of valuation.

132.06: Required Opinions

(1) General. In accordance with M.G.L. c. 175, § 9B, every company doing business in this State shall annually submit the opinion of an appointed actuary as provided for by 211 CMR 132.00. The type of opinion submitted shall be determined by the provisions set forth in 211 CMR 132.06 and shall be in accordance with the applicable provisions in 211 CMR 132.00.

(2) Company Categories. For purposes of 211 CMR 132.00, companies shall be classified as follows based on the admitted assets as of the end of the calendar year for which the actuarial opinion is applicable:

- (a) Category A shall consist of those companies whose admitted assets do not exceed \$20 million;
- (b) Category B shall consist of those companies whose admitted assets exceed \$20 million but do not exceed \$100 million;
- (c) Category C shall consist of those companies whose admitted assets exceed \$100 million but do not exceed \$500 million; and
- (d) Category D shall consist of those companies whose admitted assets exceed \$500 million.

(3) Exemption Eligibility Tests.

(a) Any Category A company that, for any year beginning with the year in which 211 CMR 132.00 becomes effective, meets all of the following criteria shall be eligible for exemption from submission of a statement of actuarial opinion in accordance with 211 CMR 132.08 for the year in which these criteria are met. The ratios in 211 CMR 132.06(3)(a)1. through 3. shall be calculated based on amounts as of the end of the calendar year for which the actuarial opinion is applicable.

- 1. The ratio of the sum of capital and surplus to the sum of cash and invested assets is at least equal to .10.
- 2. The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is less than .30.
- 3. The ratio of the book value of the non-investment grade bonds to the sum of capital and surplus is less than .50.
- 4. The Examiner Team for the National Association of Insurance Commissioners (NAIC) has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or the company has resolved the first or second priority status to the satisfaction of the Commissioner of the state of domicile and the Commissioner has so notified the chair of the NAIC Life and Health Actuarial Task Force and the NAIC Staff and Support Office.

(b) Any Category B company that, for any year beginning with the year in which this regulation becomes effective, meets all of the following criteria shall be eligible for exemption from submission of a statement of actuarial opinion in accordance with 211 CMR 132.08 for the year in which the criteria are met. The ratios in 211 CMR 132.06(3)(b)1. through 3. shall be calculated based on amounts as of the end of the calendar year for which the actuarial opinion is applicable.

- 1. The ratio of the sum of capital and surplus to the sum of cash and invested assets is at least equal to .07.
- 2. The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is less than .40.
- 3. The ratio of the book value of the non-investment grade bonds to the sum of capital and surplus is less than .50.
- 4. The Examiner Team for the National Association of Insurance Commissioners (NAIC) has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or the company has resolved the first or second priority status to the satisfaction of the Commissioner of the state of domicile and the Commissioner has so notified the chair of the NAIC Life and Health Actuarial Task Force and the NAIC Staff and Support Office.

132.06: continued

(c) Any Category A or Category B company that meets all of the criteria set forth in 211 CMR 132.06(3)(a) or (b), whichever is applicable, is exempted from submission of a statement of actuarial opinion in accordance with 211 CMR 132.08 unless the Commissioner specifically indicates to the company that the exemption is not to be taken.

(d) Any Category A or Category B company that, for any year beginning with the year in which 211 CMR 132.00 becomes effective, is not exempted under 211 CMR 132.06(3)(c) shall be required to submit a statement of actuarial opinion in accordance with 211 CMR 132.08 for the year for which it is not exempt.

(e) Any Category C company that, after submitting an opinion in accordance with 211 CMR 132.08, meets all of the following criteria shall not be required, unless required in accordance with 211 CMR 132.06(3)(f), to submit a statement of actuarial opinion in accordance with 211 CMR 132.08 more frequently than every third year. Any Category C company which fails to meet all of the following criteria for any year shall submit a statement of actuarial opinion in accordance with 211 CMR 132.08 for that year. The ratios in 211 CMR 132.06(3)(e)1. through 3. shall be calculated based on amounts as of the end of the calendar year for which the actuarial opinion is applicable.

1. The ratio of the sum of capital and surplus to the sum of cash and invested assets is at least equal to .05.

2. The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is less than .50.

3. The ratio of the book value of the non-investment grade bonds to the sum of the capital and surplus is less than .50.

4. The Examiner Team for the National Association of Insurance Commissioners (NAIC) has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or the company has resolved the first or second priority status to the satisfaction of the Commissioner of the state of domicile and the Commissioner has so notified the chair of the NAIC Life and Health Actuarial Task Force and the NAIC Staff and Support Office.

(f) Any company which is not required by 211 CMR 132.06 to submit a statement of actuarial opinion in accordance with 211 CMR 132.08 for any year shall submit a statement of actuarial opinion in accordance with 211 CMR 132.07 for that year unless as provided for by the second paragraph of 211 CMR 132.03 the Commissioner requires a statement of actuarial opinion in accordance with 211 CMR 132.08.

(4) Large Companies. Every Category D company shall submit a statement of actuarial opinion in accordance with 211 CMR 132.08 for each year beginning with the year in which 211 CMR 132.00 becomes effective.

#### 132.07: Statement of Actuarial Opinion Not Including an Asset Adequacy Analysis

(1) General Description. The statement of actuarial opinion required by 211 CMR 132.07 shall consist of a paragraph identifying the appointed actuary and his or her qualifications; a regulatory authority paragraph stating that the company is exempt pursuant to 211 CMR 132.00 from submitting a statement of actuarial opinion based on an asset adequacy analysis and that the opinion, which is not based on an asset adequacy analysis, is rendered in accordance with 211 CMR 132.07; a scope paragraph identifying the subjects on which the opinion is to be expressed and describing the scope of the appointed actuary's work; and an opinion paragraph expressing the appointed actuary's opinion as required by M.G.L. c. 175, § 9B.

(2) Recommended Language. The following language provided is that which in typical circumstances would be included in a statement of actuarial opinion in accordance with 211 cmr 132.07. The language may be modified as needed to meet the circumstances of a particular case, but the appointed actuary should use language which clearly expresses his or her professional judgment. However, in any event the opinion shall retain all pertinent aspects of the language provided in 211 CMR 132.07.

## 132.07: continued

(a) The opening paragraph should indicate the appointed actuary's relationship to the company. For a company actuary, the opening paragraph of the actuarial opinion should read as follows:

"I, [name of actuary], am [title] of [name of company] and a member of the American Academy of Actuaries. I was appointed by, or by the authority of, the Board of Directors of said insurer to render this opinion as stated in the letter to the Commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health companies."

For a consulting actuary, the opening paragraph of the actuarial opinion should contain a sentence such as:

"I, [name and title of actuary], a member of the American Academy of Actuaries, am associated with the firm of [insert name of consulting firm]. I have been appointed by, or by the authority of, the Board of Directors of [name of company] to render this opinion as stated in the letter to the Commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

(b) The regulatory authority paragraph should include a statement such as the following:

"Said company is exempt pursuant to 211 CMR 132.00 of the Massachusetts Division of Insurance from submitting a statement of actuarial opinion based on an asset adequacy analysis. This opinion, which is not based on an asset adequacy analysis, is rendered in accordance with 211 CMR 132.07."

(c) The scope paragraph should contain a sentence such as the following: "I have examined the actuarial assumptions and actuarial methods used in determining reserves and related actuarial items listed below, as shown in the annual statement of the company, as prepared for filing with state regulatory officials, as of December 31, [ ]."

The paragraph should list items and amounts with respect to which the appointed actuary is expressing an opinion. The list should include but not be necessarily limited to:

1. Aggregate reserve and deposit funds for policies and contracts included in Exhibit 8;
2. Aggregate reserve and deposit funds for policies and contracts included in Exhibit 9;
3. Deposit funds, premiums, dividend and coupon accumulations and supplementary contracts not involving life contingencies included in Exhibit 10; and
4. Policy and contract claims--liability end of current year included in Exhibit 11, Part I.

(d) If the appointed actuary has examined the underlying records, the scope paragraph should also include the following:

"My examination included such review of the actuarial assumptions and actuarial methods and of the underlying basic records and such tests of the actuarial calculations as I considered necessary."

(e) If the appointed actuary has not examined the underlying records, but has relied upon listings and summaries of policies in force prepared by the company or a third party, the scope paragraph should include a sentence such as one of the following:

"I have relied upon listings and summaries of policies and contracts and other liabilities in force prepared by [name and title of company officer certifying in force records] as certified in the attached statement. (See accompanying affidavit by a company officer.) In other respects my examination included review of the actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary." or

"I have relied upon [name of accounting firm] for the substantial accuracy of the in force records inventory and information concerning other liabilities, as certified in the attached statement. In other respects my examination included review of the actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary."

The statement of the person certifying shall follow the form indicated by 211 CMR 132.07(2)(j).

(f) The opinion paragraph should include the following:

"In my opinion the amounts carried in the balance sheet on account of the actuarial items identified above:

132.07: continued

1. Are computed in accordance with those presently accepted actuarial standards which specifically relate to the opinion required under 211 CMR 132.07;
2. Are based on actuarial assumptions which produce reserves at least as great as those called for in any contract provision as to reserve basis and method, and are in accordance with all other contract provisions;
3. Meet the requirements of the laws and regulations of the Commonwealth of Massachusetts and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed.
4. Are computed on the basis of assumptions consistent with those used in computing the corresponding items in the annual statement of the preceding year-end with any exceptions as noted below; and
5. Include provision for all actuarial reserves and related statement items which ought to be established.

The actuarial methods, considerations and analyses used in forming my opinion conform to the appropriate Compliance Guidelines as promulgated by the Actuarial Standards Board, which guidelines form the basis of this statement of opinion."

(g) The concluding paragraph should document the eligibility for the company to provide an opinion as provided by 211 CMR 132.07. It shall include the following:

"This opinion is provided in accordance with 211 CMR 132.07. As such it does not include an opinion regarding the adequacy of reserves and related actuarial items when considered in light of the assets which support them.

Eligibility for 211 CMR 132.07 is confirmed as follows:

1. The ratio of the sum of capital and surplus to the sum of cash and invested assets is [insert amount], which equals or exceeds the applicable criterion based on the admitted assets of the company (211 CMR 132.06(3)).
2. The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is [insert amount], which is less than the applicable criteria based on the admitted assets of the company (211 CMR 132.06(3)).
3. The ratio of the book value of the non-investment grade bonds to the sum of capital and surplus is [insert amount], which is less than the applicable criteria of .50.
4. To my knowledge, the NAIC Examiner Team has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable or the company has resolved the first or second priority status to the satisfaction of the commissioner of the state of domicile.
5. To my knowledge there is not a specific request from any Commissioner requiring an asset adequacy analysis opinion.

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Signature of Appointed Actuary

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Address of Appointed Actuary

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Telephone Number of Appointed Actuary"

(h) If there has been any change in the actuarial assumptions from those previously employed, that change should be described in the annual statement or in a paragraph of the statement of actuarial opinion, and the reference in 211 CMR 132.07(2)(f)4. to consistency should read as follows:

"... with the exception of the change described on Page [ ] of the annual statement (or in the preceding paragraph)."

The adoption for new issues or new claims or other new liabilities of an actuarial assumption which differs from a corresponding assumption used for prior new issues or new claims or other new liabilities is not a change in actuarial assumptions within the meaning of this paragraph.

132.07: continued

- (i) If the appointed actuary is unable to form an opinion, he or she shall refuse to issue a statement of actuarial opinion. If the appointed actuary's opinion is adverse or qualified, he or she shall issue an adverse or qualified actuarial opinion explicitly stating the reason(s) for such opinion. This statement should follow the scope paragraph and precede the opinion paragraph.
- (j) If the appointed actuary does not express an opinion as to the accuracy and completeness of the listings and summaries of policies in force, there should be attached to the opinion, the statement of a company officer or accounting firm who prepared such underlying data similar to the following:

"I [name of officer], [title] of [name and address of company or accounting firm], hereby affirm that the listings and summaries of policies and contracts in force as of December 31, [ ], prepared for and submitted to [name of appointed actuary], were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.

\_\_\_\_\_  
Signature of the Officer of the Company  
or Accounting Firm

\_\_\_\_\_  
Address of the Officer of the Company  
or Accounting Firm

\_\_\_\_\_  
Telephone Number of the Officer of the  
Company or Accounting Firm"

132.08: Statement of Actuarial Opinion Based On an Asset Adequacy Analysis

- (1) General Description. The statement of actuarial opinion submitted in accordance with 211 CMR 132.08 shall consist of:
  - (a) A paragraph identifying the appointed actuary and his or her qualifications (see 211 CMR 132.08(2)(a));
  - (b) A scope paragraph identifying the subjects on which an opinion is to be expressed and describing the scope of the appointed actuary's work, including a tabulation delineating the reserves and related actuarial items which have been analyzed for asset adequacy and the method of analysis, (see 211 CMR 132.08(2)(b)) and identifying the reserves and related actuarial items covered by the opinion which have not been so analyzed;
  - (c) A reliance paragraph describing those areas, if any, where the appointed actuary has deferred to other experts in developing data, procedures or assumptions, (*e.g.*, anticipated cash flows from currently owned assets, including variation in cash flows according to economic scenarios (see 211 CMR 132.08(2)(c)), supported by a statement of each such expert in the form prescribed by 211 CMR 132.08(5); and
  - (d) An opinion paragraph expressing the appointed actuary's opinion with respect to the adequacy of the supporting assets to mature the liabilities (see 211 CMR 132.08(2)(f)).
  - (e) One or more additional paragraphs will be needed in individual company cases as follows:
    - 1. If the appointed actuary considers it necessary to state a qualification of his or her opinion;
    - 2. If the appointed actuary must disclose the method of aggregation for reserves of different products or lines of business for asset adequacy analysis;
    - 3. If the appointed actuary must disclose reliance upon any portion of the assets supporting the Asset Valuation Reserve (AVR), Interest Maintenance Reserve (IMR) or other mandatory or voluntary statement of reserves for asset adequacy analysis.
    - 4. If the appointed actuary must disclose an inconsistency in the method of analysis or basis of asset allocation used at the prior opinion date with that used for this opinion.



132.08: continued

5. If the appointed actuary must disclose whether additional reserves of the prior opinion date are released as of this opinion date, and the extent of the release.
6. If the appointed actuary chooses to add a paragraph briefly describing the assumptions which form the basis for the actuarial opinion.

(2) Recommended Language. 211 CMR 132.08(2)(a) and (b) is to be included in the statement of actuarial opinion in accordance with 211 CMR 132.08. Language is that which in typical circumstances should be included in a statement of actuarial opinion. The language may be modified as needed to meet the circumstances of a particular case, but the appointed actuary should use language which clearly expresses his or her professional judgment. However, in any event the opinion shall retain all pertinent aspects of the language provided in this section.

(a) The opening paragraph should generally indicate the appointed actuary's relationship to the company and his or her qualifications to sign the opinion. For a company actuary, the opening paragraph of the actuarial opinion should read as follows:

"I, [name], am [title] of [insurance company name] and a member of the American Academy of Actuaries. I was appointed by, or by the authority of, the Board of Directors of said insurer to render this opinion as stated in the letter to the Commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

For a consulting actuary, the opening paragraph should contain a sentence such as:

"I, [name], a member of the American Academy of Actuaries, am associated with the firm of [name of consulting firm]. I have been appointed by, or by the authority of, the Board of Directors of [name of company] to render this opinion as stated in the letter to the Commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

(b) The scope paragraph should include a statement such as the following:

"I have examined the actuarial assumptions and actuarial methods used in determining reserves and related actuarial items listed below, as shown in the annual statement of the company, as prepared for filing with state regulatory officials, as of December 31, 19[ ]. Tabulated below are those reserves and related actuarial items which have been subjected to asset adequacy analysis."

132.08: continued

Asset Adequacy Tested Amounts Reserves and Liabilities					
Statement Item	Formula Reserves (1)	Additional Actuarial Reserves (a) (2)	Analysis Method (b)	Other Amount (3)	Total Amount (1)+(2)+(3) (4)
<b>Exhibit 8</b>					
A Life Insurance					
B Annuities					
C Supplementary Contracts Involving Life Contingencies					
D Accidental Death Benefit					
E Disability - Active					
F Disability - Disabled					
G Miscellaneous					
Total (Exhibit 8 Item 1, Page 3)					
<b>Exhibit 9</b>					
A Active Life Reserve					
B Claim Reserve					
Total (Exhibit 9 Item 2, Page 3)					
<b>Exhibit 10</b>					
1 Premiums and Other Deposit Funds					
1.1 Policyholder Premiums (Page 3, Line 10.1)					
1.2 Guaranteed Interest Contracts (Page 3, Line 10.2)					
1.3 Other Contract Deposit Funds (Page 3, Line 10.3)					

132.08: continued

Asset Adequacy Tested AmountsReserves and Liabilities (continued)					
Statement Item	Formula Reserves (1)	Additional Actuarial Reserves (a) (2)	Analysis Method (b)	Other Amount (3)	Total Amount (1)+(2)+(3) (4)
2 Supplementary Contracts Not Involving Life Contingencies (Page 3, Line 3)					
3 Dividend and Coupon Accumulations (Page 3, Line 5)					
Total Exhibit 10					
Exhibit 11 Part 1					
1 Life (Page 3, \ Line 4.1)					
2 Health (Page 3, Line 4.2)					
Total Exhibit 11, Part 1					
Separate Accounts (Page 3, Line 27)					
TOTAL RESERVES					

IMR (Page ____ Line ____)
AVR (Page ____ Line ____)
(c)

- Notes:**
- (a) The additional actuarial reserves are the reserves established under 211 CMR 132.05(6)(b) or (c).
  - (b) The appointed actuary should indicate the method of analysis, determined in accordance with the standards for asset adequacy analysis referred to in 211 CMR 132.05(4), by means of symbols which should be defined in footnotes to the table.
  - (c) Allocated amount.

132.08: continued

(c) If the appointed actuary has relied on other experts to develop certain portions of the analysis, the reliance paragraph should include a statement such as the following:

"I have relied on [name], [title] for [e.g., anticipated cash flows from currently owned assets, including variations in cash flows according to economic scenarios] and, as certified in the attached statement, ..." or

"I have relied on personnel as cited in the supporting memorandum for certain critical aspects of the analysis in reference to the accompanying statement."

Such a statement of reliance on other experts should be accompanied by a statement by each of such experts of the form prescribed by 211 CMR 132.08(5).

(d) If the appointed actuary has examined the underlying asset and liability records, the reliance paragraph should also include the following:

"My examination included such review of the actuarial assumptions and actuarial methods and of the underlying basic asset and liability records and such tests of the actuarial calculations as I considered necessary."

(e) If the appointed actuary has not examined the underlying records, but has relied upon listings and summaries of policies in force and/or asset records prepared by the company or a third party, the reliance paragraph should include a sentence such as:

"I have relied upon listings and summaries [of policies and contracts, of asset records] prepared by [name and title of company officer certifying in-force records] as certified in the attached statement. In other respects my examination included such review of the actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary." or

"I have relied upon [name of accounting firm] for the substantial accuracy of the in-force records inventory and information concerning other liabilities, as certified in the attached statement. In other respects my examination included review of the actuarial assumptions and actuarial methods and tests of the actuarial calculations as I considered necessary."

Such a section must be accompanied by a statement by each person relied upon of the form prescribed by 211 CMR 132.08(5).

(f) The opinion paragraph should include the following:

"In my opinion the reserves and related actuarial values concerning the statement items identified above:

1. Are computed in accordance with presently accepted actuarial standards consistently applied and are fairly stated, in accordance with sound actuarial principles;
2. Are based on actuarial assumptions which produce reserves at least as great as those called for in any contract provision as to reserve basis and method, and are in accordance with all other contract provisions;
3. Meet the requirements of the Insurance Law and regulation of the Commonwealth of Massachusetts and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed.
4. Are computed on the basis of assumptions consistent with those used in computing the corresponding items in the annual statement of the preceding year-end (with any exceptions noted below);
5. Include provision for all actuarial reserves and related statement items which ought to be established.

The reserves and related items, when considered in light of the assets held by the company with respect to such reserves and related actuarial items including, but not limited to, the investment earnings on such assets, and the considerations anticipated to be received and retained under such policies and contracts, make adequate provision, according to presently accepted actuarial standards of practice, for the anticipated cash flows required by the contractual obligations and related expenses of the company.

The actuarial methods, considerations and analyses used in forming my opinion conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis of this statement of opinion.

This opinion is updated annually as required by statute. To the best of my knowledge, there have been no material changes from the applicable date of the annual statement to the date of the rendering of this opinion which should be considered in reviewing this opinion. or

132.08: continued

The following material change(s) which occurred between the date of the statement for which this opinion is applicable and the date of this opinion should be considered in reviewing this opinion: (Describe the change or changes.)

**Note:** Choose one of the above two paragraphs, whichever is applicable.

The impact of unanticipated events subsequent to the date of this opinion is beyond the scope of this opinion. The analysis of asset adequacy portion of this opinion should be viewed recognizing that the company's future experience may not follow all the assumptions used in the analysis.

\_\_\_\_\_  
Signature of Appointed Actuary

\_\_\_\_\_  
Address of Appointed Actuary

\_\_\_\_\_  
Telephone Number of Appointed Actuary"

- (3) Assumptions for New Issues. The adoption for new issues or new claims or other new liabilities of an actuarial assumption which differs from a corresponding assumption used for prior new issues or new claims or other new liabilities is not a change in actuarial assumptions within the meaning of 211 CMR 132.08.
- (4) Adverse Opinions. If the appointed actuary is unable to form an opinion, then he or she shall refuse to issue a statement of actuarial opinion. If the appointed actuary's opinion is adverse or qualified, then he or she shall issue an adverse or qualified actuarial opinion explicitly stating the reason(s) for such opinion. This statement should follow the scope paragraph and precede the opinion paragraph.
- (5) Reliance on Data Furnished by Other Persons. If the appointed actuary does not express an opinion as to the accuracy and completeness of the listings and summaries of policies in force and/or asset oriented information, there shall be attached to the opinion the statement of a company officer or accounting firm who prepared such underlying data similar to the following:

"I [name of officer], [title], of [name of company or accounting firm], hereby affirm that the listings and summaries of policies and contracts in force as of December 31, 19[ ], and other liabilities prepared for and submitted to [name of appointed actuary] were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.

\_\_\_\_\_  
Signature of the Officer of the Company  
or Accounting Firm

\_\_\_\_\_  
Address of the Officer of the Company  
or Accounting Firm

\_\_\_\_\_  
Telephone Number of the Officer of the  
Company or Accounting Firm"

and/or

132.08: continued

"I, [name of officer], [title] of [name of company, accounting firm, or security analyst], hereby affirm that the listings, summaries and analyses relating to data prepared for and submitted to [name of appointed actuary] in support of the asset-oriented aspects of the opinion were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.

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Signature of the Officer of the Company,  
Accounting Firm or the Security Analyst

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Address of the Officer of the Company,  
Accounting Firm or the Security Analyst

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Telephone Number of the Officer of the  
Company, Accounting Firm or  
the Security Analyst"

132.09: Description of Actuarial Memorandum Including an Asset Adequacy Analysis

(1) General.

(a) In accordance with M.G.L. c. 175, § 9B, the appointed actuary shall prepare a memorandum to the company describing the analysis done in support of his or her opinion regarding the reserves under a 211 CMR 132.08 opinion. The memorandum shall be made available for examination by the Commissioner upon his or her request but shall be returned to the company after such examination and shall not be considered a record of the insurance department or subject to automatic filing with the Commissioner.

(b) In preparing the memorandum, the appointed actuary may rely on, and include as a part of his or her own memorandum, memoranda prepared and signed by other actuaries who are qualified within the meaning of 211 CMR 132.05(2), with respect to the areas covered in such memoranda, and so state in their memoranda.

(c) If the Commissioner requests a memorandum and no such memorandum exists or if the Commissioner finds that the analysis described in the memorandum fails to meet the standards of the Actuarial Standards Board or the standards and requirements of 211 CMR 132.00, the Commissioner may designate a qualified actuary to review the opinion and prepare such supporting memorandum as is required for review. The reasonable and necessary expense of the independent review shall be paid by the company but shall be directed and controlled by the Commissioner.

(d) The reviewing actuary shall have the same status as an examiner for purposes of obtaining data from the company and the work papers and documentation of the reviewing actuary shall be retained by the Commissioner; provided, however, that any information provided by the company to the reviewing actuary and included in the work papers shall be considered as material provided by the company to the Commissioner and shall be kept confidential to the same extent as is prescribed by law with respect to other material provided by the company to the Commissioner pursuant to the statute governing 211 CMR 132.00.

The reviewing actuary shall not be an employee of a consulting firm involved with the preparation of any prior memorandum or opinion for the insurer pursuant to 211 CMR 132.00 for any one of the current year or the preceding three years.

(2) Details of the Memorandum Section Documenting Asset Adequacy Analysis (211 CMR 132.08). When an actuarial opinion under 211 CMR 132.08 is provided, the memorandum shall demonstrate that the analysis has been done in accordance with the standards for asset adequacy referred to in 211 CMR 132.05(4) and any additional standards under 211 CMR 132.00. It shall specify:

132.09: continued

- (a) For reserves:
  1. Product descriptions including market description, underwriting and other aspects of a risk profile and the specific risks the appointed actuary deems significant;
  2. Source of liability in force;
  3. Reserve method and basis;
  4. Investment reserves;
  5. Reinsurance arrangements.
- (b) For assets:
  1. Portfolio descriptions, including a risk profile disclosing the quality, distribution and types of assets;
  2. Investment and disinvestment assumptions;
  3. Source of asset data;
  4. Asset valuation bases.
- (c) Analysis basis:
  1. Methodology;
  2. Rationale for inclusion/exclusion of different blocks of business and how pertinent risks were analyzed;
  3. Rationale for degree of rigor in analyzing different blocks of business;
  4. Criteria for determining asset adequacy;
  5. Effect of federal income taxes, reinsurance and other relevant factors.
- (d) Summary of Results.
- (e) Conclusion(s).

(3) Conformity to Standards of Practice. The memorandum shall include a statement:

"Actuarial methods, considerations and analyses used in the preparation of this memorandum conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis for this memorandum."

#### 132.10: Additional Considerations for Analysis

(1) Aggregation. For the asset adequacy analysis for the statement of actuarial opinion provided in accordance with 211 CMR 132.08, reserves and assets may be aggregated by either of the following methods:

- (a) Aggregate the reserves and related actuarial items, and the supporting assets, for different products or lines of business, before analyzing the adequacy of the combined assets to mature the combined liabilities. The appointed actuary must be satisfied that the assets held in support of the reserves and related actuarial items so aggregated are managed in such a manner that the cash flows from the aggregated assets are available to help mature the liabilities from the blocks of business that have been aggregated.
- (b) Aggregate the results of asset adequacy analysis of one or more products or lines of business, the reserves for which prove through analysis to be redundant, with the results of one or more products or lines of business, the reserves for which prove through analysis to be deficient. The appointed actuary must be satisfied that the asset adequacy results for the various products or lines of business for which the results are so aggregated:
  1. Are developed using consistent economic scenarios, or
  2. Are subject to mutually independent risks, *i.e.*, the likelihood of events impacting the adequacy of the assets supporting the redundant reserves is completely unrelated to the likelihood of events impacting the adequacy of the assets supporting the deficient reserves.

In the event of any aggregation, the actuary must disclose in his or her opinion that such reserves were aggregated on the basis of method 211 CMR 132.10(1)(b)1. or 2., whichever is applicable, and describe the aggregation in the supporting memorandum.

132.10: continued

(2) Selection of Assets for Analysis. The appointed actuary shall analyze only those assets held in support of the reserves which are the subject for specific analysis, hereafter called "specified reserves." A particular asset or portion thereof supporting a group of specified reserves cannot support any other group of specified reserves. An asset may be allocated over several groups of specified reserves. The annual statement value of the assets held in support of the reserves shall not exceed the annual statement value of the specified reserves, except as provided in 211 CMR 132.10(3). If the method of asset allocation is not consistent from year to year, the extent of its inconsistency should be described in the supporting memorandum.

(3) Use of Assets Supporting the Interest Maintenance Reserve and the Asset Valuation Reserve. An appropriate allocation of assets in the amount of the Interest Maintenance Reserve (IMR), whether positive or negative, must be used in any asset adequacy analysis. Analysis of risks regarding asset default may include an appropriate allocation of assets supporting the Asset Valuation Reserve (AVR); these AVR assets may not be applied for any other risks with respect to reserve adequacy. Analysis of these and other risks may include assets supporting other mandatory or voluntary reserves available to the extent not used for risk analysis and reserve support.

The amount of the assets used for the AVR must be disclosed in the Table of Reserves and Liabilities of the opinion and in the memorandum. The method used for selecting particular assets or allocated portions of assets must be disclosed in the memorandum.

(4) Required Interest Scenarios. For the purpose of performing the asset adequacy analysis required by 211 CMR 132.00, the qualified actuary is expected to follow standards adopted by the Actuarial Standards Board; nevertheless, the appointed actuary must consider in the analysis the effect of at least the following interest rate scenarios:

- (a) Level with no deviation;
- (b) Uniformly increasing over ten years at a half percent per year and then level;
- (c) Uniformly increasing at 1% per year over five years and then uniformly decreasing at 1% per year to the original level at the end of ten years and then level;
- (d) An immediate increase of 3% and then level;
- (e) Uniformly decreasing over ten years at a half percent per year and then level;
- (f) Uniformly decreasing at 1% per year over five years and then uniformly increasing at 1% per year to the original level at the end of ten years and then level; and
- (g) An immediate decrease of 3% and then level.

For these and other scenarios which may be used, projected interest rates for a five year Treasury Note need not be reduced beyond the point where the five year Treasury Note yield would be at 50% of its initial level.

The beginning interest rates may be based on interest rates for new investments as of the valuation date similar to recent investments allocated to support the product being tested or be based on an outside index, such as Treasury yields, of assets of the appropriate length on a date close to the valuation date. Whatever method is used to determine the beginning yield curve and associated interest rates should be specifically defined. The beginning yield curve and associated interest rates should be consistent for all interest rate scenarios.

(5) Documentation. The appointed actuary shall retain on file, for at least seven years, sufficient documentation so that it will be possible to determine the procedures followed, the analyses performed, the bases for assumptions and the results obtained.

#### REGULATORY AUTHORITY

211 CMR 132.00: M.G.L. c. 175, § 9; c. 176, § 41.

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